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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

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In the Matter of)

Rulemaking to Amend Part 15)

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To: The Commission

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APR 28 1997

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

PETITION FOR RULEMAKING

I. INTRODUCTION

Checkpoint Systems, Inc. ("Checkpoint"), by its attorneys and pursuant to Section 1.401 of the rules of the Federal Communications Commission ("FCC" or "Commission"), 47 C.F.R. § 1.401, respectfully submits this Petition for Rulemaking requesting the Commission to initiate a rulemaking proceeding to amend its rules to permit Checkpoint to operate its electronic article surveillance ("EAS") system in the 1.705 - 30 MHz band at a maximum radiated emission level of 1000 microvolts/meter measured at 30 meters and at a maximum conducted emission level of 3000 microvolts.

Checkpoint designs, manufactures, and distributes EAS systems used as anti-theft systems in retail and department stores, drug stores, discount chains, libraries, and other commercial establishments throughout the country. Checkpoint's EAS system provides the capability to detect a tag concealed in, or attached to, a protected article through the use of a radiofrequency ("RF") generator that sweeps over the frequency range of operation. When the frequency sweep detects the tag, which contains a resonant printed circuit, the operator is alerted to the presence of a protected article. The area containing the protected articles is

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arranged so that the only exit is through a gate that houses the EAS equipment. Normally, the tag is deactivated or removed at the check-out counter of the commercial establishment or library before the protected article is carried through the gate housing the EAS equipment. Alternatively, rather than deactivating or removing the tag at the check-out counter, the EAS system operator may choose to bypass the system by bringing the item around, instead of through, the EAS gate.

Checkpoint's EAS equipment currently operates within the 1.705 - 10 MHz band and is regulated as unlicensed intentional radiator equipment subject to Subpart C of Part 15 of the FCC's rules. Part 15 of the FCC's rules permits intentional radiators such as Checkpoint's EAS equipment to operate without restrictions as to bandwidth, duty cycle, modulation technique, or application, provided that such equipment complies with specified radiated and conducted emission limits.^{1/} Specifically, Section 15.207 of the FCC's rules imposes a conducted emission limit of 250 microvolts for intentional radiators operating in

^{1/} Although Section 15.205(a) of the FCC's rules prohibits intentional radiators from operating within certain restricted frequency bands, Section 15.205(d)(1) provides an exemption for swept frequency field disturbance sensors operating between 1.705 and 37 MHz as long the following three conditions are met: (1) the emissions from the sensors sweep through the restricted frequency bands, (2) the sweep is never stopped with the fundamental emission within the restricted frequency bands, and (3) the fundamental emission is outside of the restricted frequency bands more than 99% of the time the device is actively transmitting, without compensation for duty cycle. Although the FCC rules do not define "swept frequency" systems, Checkpoint assumes for purposes of Section 15.205(d)(1) that any approach which spreads the RF energy of a signal more or less uniformly over a wide bandwidth and avoids the restricted bands in the manner required by Section 15.205(d)(1) thereby satisfies the requirements for "swept frequency" systems. Such spreading reduces the power density of the signal at any frequency within the transmitted bandwidth and thus minimizes the potential for interference to other signals occupying the same bandwidth. Since the operation of Checkpoint's EAS equipment meets all three conditions set forth in Section 15.205(d)(1), Checkpoint's EAS equipment is permitted to operate within the restricted frequency bands.

the 450 kHz - 30 MHz band. In addition, Section 15.209 of the FCC's rules generally prohibits intentional radiators operating in the 1.705 - 30 MHz band from operating with an emission field strength in excess of 30 microvolts/meter measured at a distance of 30 meters. Section 15.223, however, provides an exception to the general radiated emission limit for intentional radiators operating in the 1.705 - 10 MHz band by imposing a maximum radiated emission limit of 100 microvolts/meter measured at a distance of 30 meters for such devices. Because Checkpoint's EAS system presently operates in the 1.705 - 10 MHz band, it is subject to the FCC's current conducted emission limit of 250 microvolts and radiated emission limit of 100 microvolts/meter measured at 30 meters.

Checkpoint seeks to develop and operate advanced state-of-the-art EAS equipment allowing for greater flexibility in the installation and use of the equipment. The development of this state-of-the-art EAS equipment will enhance the effectiveness of the anti-theft design and satisfy customer demands. The operation of such equipment, however, will require greater power and thus will not comply with currently allowable radiated and conducted emission limits. As demonstrated below, the proposed increase in the maximum allowable radiated and conducted emission levels will better promote Part 15's underlying regulatory purpose of facilitating the rapid delivery of innovative devices and technologies that serve the needs of the public while minimizing the potential for interference to licensed radio services.

II. THE FCC HISTORICALLY HAS REVISED ITS PART 15 RULES TO ACCOMMODATE THE EFFECTIVE OPERATION OF EAS EQUIPMENT

Since 1938, the FCC has allowed devices employing low-level RF signals to be operated without the need for individual licensing as long as their operation caused no

harmful interference to licensed services and the devices did not generate emissions or field strength levels greater than a specified level for the given frequency range. See Revision of Part 15 of the Rules Regarding the Operation of Radio Frequency Devices Without an Individual License, 4 FCC Rcd 3493 (1989) ("Part 15 Order"). As the industry designed products intended for operation on higher frequencies, it became more difficult to meet the field strength limits specified in the early standards, since the allowable field strength level decreased as the operating frequency increased. Thus, over the years, the FCC has amended and expanded Part 15 of its rules to permit the unlicensed operation of new devices at higher frequencies, where the widespread deployment of such devices would not cause harmful interference to authorized radio services. As improvements in equipment developed and as both licensed and unlicensed services proliferated, the FCC recognized that its standards to control harmful interference had become unnecessarily restrictive. Id. at 3494.

In 1989, the FCC adopted a comprehensive revision of Part 15 to encourage more effective use of the spectrum by providing additional technical and operational flexibility in the design, manufacture, and use of unlicensed devices. Id. In revising Part 15 in its entirety, the Commission intended to "strike an equitable balance between the needs of the public for the services provided by non-licensed RF devices and the need to ensure that these devices do not cause harmful interference to licensed radio services." Id. The FCC also sought to "restore technical flexibility and administrative convenience" to the rules governing unlicensed RF devices as well as to "address changes in the nature and number of [unlicensed RF devices] that have occurred in recent years." Id. In its efforts to achieve its stated goals, the FCC set out to establish uniform technical standards for the various

unlicensed services, while also permitting exceptions to such uniform standards to ensure the continued operation of devices already allowed under the rules. Thus, although the FCC adopted a single conducted emission limit of 250 microvolts for all unlicensed intentional and unintentional radiators operating in the 450 kHz - 30 MHz band, it also provided exceptions for Class A digital devices and carrier current systems by permitting such equipment to operate at higher or unrestricted conducted emission levels. Id. at 3496, 3554 n.6.^{2/} In addition, although the FCC imposed a general radiated emission limit of 30 microvolts/meter measured at 30 meters for unlicensed intentional radiators operating in the 1.705 - 30 MHz band, it also maintained an exception for intentional radiators operating in the 1.705 - 10 MHz band, which already were authorized to operate at maximum radiated emission level of 100 microvolts/meter measured at 30 meters.

Since the FCC's comprehensive revision of Part 15 in 1989, there has been no comparably significant re-write of Part 15, despite substantial technological advances and the surge in demand for new and improved services offered by unlicensed RF devices. Moreover, when the FCC in 1989 adopted Section 15.223 authorizing the operation of intentional radiators in the 1.705 - 10 MHz band at a maximum radiated emission level of 100 microvolts/meter measured at 30 meters, it was merely re-codifying the technical restrictions that existed at the time. The FCC did not specifically consider whether there was a need to relax the technical restrictions on the operation of anti-theft equipment in the 1.705 - 30 MHz band.

^{2/} For a discussion of the FCC's exceptions for Class A digital devices and carrier current systems, see Section III(B) herein.

Indeed, the FCC has not considered that issue since 1977, when, in response to a petition for rulemaking filed by Checkpoint, it amended Part 15 to provide for the operation of swept frequency anti-theft devices. See The Amendment of Part 15 To Provide for the Operation of Wide-Band Swept RF Equipment Used as Anti-Pilferage Devices, 65 FCC 2d 802 (1977) ("Anti-Pilferage Devices"). Prior to that time, the Part 15 rules prohibited Checkpoint's EAS system from operating at a radiated emission level in excess of 15 microvolts/meter measured at 5 to 10 meters. Checkpoint in its petition for rulemaking argued that its EAS system could not operate effectively under such a restrictive requirement. Checkpoint thus requested an increased radiated emission limit of 100 microvolts/meter measured at 30 meters. Checkpoint asserted that such a higher emission level was necessary to ensure reliable and effective operation of its system, particularly in areas of high ambient RF noise caused by fluorescent lighting, air conditioning, elevators, cash registers, and similar equipment, which would overwhelm an EAS system with less power. Id. at 804. Finding these assertions persuasive, the FCC agreed with Checkpoint that a radiated emission level of 100 microvolts/meter measured at 30 meters was indeed acceptable and not likely to cause interference, especially since Checkpoint's EAS devices typically were installed inside buildings, which can be expected to attenuate the signals radiated from these devices and further reduce the chance of interference. The FCC also noted that Checkpoint's EAS devices operated on a non-interference basis to licensed services, and in the unlikely event of harmful interference resulting from the operation of Checkpoint's EAS devices, such interference would be local to the interfered licensed service and thus would be easily identified and corrected. Id.

III. THE PROPOSED RELAXATION OF THE FCC'S RULES IS CONSISTENT WITH THE SPIRIT AND UNDERLYING OBJECTIVE OF PART 15

Since the FCC last considered raising the emission limits for EAS equipment in 1977, the demand and need for EAS equipment has surged and currently is growing at more than 30 percent per year. Continuous refinements in technology have made it possible to reduce even further the risk of harmful interference, while offering increasingly effective theft prevention systems to customers. As demonstrated below, Checkpoint's proposed relaxation of the current radiated and conducted emission limits for EAS equipment is long overdue, in light of the significant changes that have occurred since 1977 and the FCC's increasing willingness to relax its technical restrictions for other unlicensed RF devices. Moreover, the proposed regulatory changes also will advance Part 15's dual objective of meeting the needs of the public for innovative services provided by unlicensed RF devices as well as minimizing the potential for interference to licensed radio services.

A. The Proposed Increase in Emission Limits Will Serve the Public Need for an Effective Anti-Theft System

An increase in the radiated and conducted emission limits for EAS equipment, as proposed herein, is necessary to enable Checkpoint to offer new technology that better serves the specific needs of retail stores and other commercial establishments. In particular, the proposed increase in emission limits will allow Checkpoint to offer more advanced EAS systems that permit wider exit gates by increasing the effective range of the RF generator. Wider exit gates will provide greater flexibility in the interior design of a store utilizing Checkpoint's EAS system and offer increased convenience for the store's patrons by allowing

for easier exit and entry. In addition, wider exit gates will promote greater safety for the public by facilitating speedy exiting in cases of fire and other emergencies. Wider exit gates also will make available the benefits of an effective anti-theft system to commercial establishments such as warehouses and distribution centers that currently cannot utilize Checkpoint's existing EAS system. Warehouses and distribution centers, which are particularly prone to theft because of their expensive inventories and because their large size hinders effective surveillance, presently are unable to enjoy the benefits of an effective anti-theft system because they require wider exit gates to facilitate the transport of bulk items and to accommodate forklifts and other vehicles.

In addition to providing for wider exit gates, the proposed increase in emission limits will enable Checkpoint to offer smaller encoded tags. Although these smaller tags will require a stronger signal resulting in higher emission levels than presently allowed, they also will reduce tampering by customers and enable retailers to tag smaller items. In particular, smaller tags will allow small high-margin, high-cost items to be displayed on open shelves rather than locked in display cases. This will facilitate impulse purchases and reduce customer frustration. This also will increase the effectiveness of the EAS system because a larger number of items could be tagged and monitored for theft. Consequently, reducing the current size of the encoded tags used in Checkpoint's EAS system will enhance the ease, convenience, and effectiveness of deploying those tags.

Furthermore, the application of the proposed radiated emission limit increase of 1000 microvolts/meter (measured at a distance of 30 meters) to all EAS equipment operating in the 1.705 - 30 MHz band will facilitate the deployment of a diverse array of EAS devices, which

in turn will reduce the potential for false alarms. Specifically, a particular EAS device may be designed to operate within a specified range of frequencies within the 1.705 - 30 MHz band, while another EAS device may be designed to operate within a different range of frequencies within the 1.705 - 30 MHz band. Thus, only certain tagged items will be detected by the first EAS device, while other tagged items will be detected only by the second EAS device. Consequently, a customer who has properly purchased a tagged item from a store that failed to remove or deactivate the tag may bring that item into another store without setting off the EAS equipment in the second store.

The proposed relaxation of the FCC's current radiated emission limit also is necessary to ensure the ability of EAS systems to detect tagged items. The increasing levels of ambient RF noise in commercial establishments caused by the proliferation of equipment emitting RF energy, such as fluorescent lights, air conditioners, elevators, cash registers, wireless telephones, and computer devices, threaten to impair the continued usefulness of EAS systems. As a result, Checkpoint's EAS systems must be permitted to operate at higher radiated emission levels to avoid being "drowned out" in an increasingly RF-filled environment. Indeed, when the Commission last provided an increase in the radiated emission limits for EAS devices in 1977, it recognized that such an increase was necessary "to insure reliable operation of security systems since there is normally high ambient radiofrequency noise in retail stores caused by fluorescent lighting, air conditioning, elevators, cash registers, etc., which would overwhelm a system with less power." Anti-Pilferage Devices, 65 FCC 2d at 804.

Not only will the proposed increase in emission limits enhance the technical capabilities of Checkpoint's EAS system, but such an increase also will level the economic playing field for both U.S. and foreign manufacturers of EAS equipment. Because the FCC's radiated emission limits for anti-theft devices operating in the 1.705 - 30 MHz band are significantly more restrictive than those that apply to similar devices sold in other major markets of the world, U.S. manufacturers of anti-theft devices presently are placed at a severe competitive disadvantage in certain international markets for anti-theft devices. For example, while anti-theft devices operating in the United States on frequency levels between 1.705 and 10 MHz are subject to a radiated emission limit of 100 microvolts/meter measured at 30 meters, similar devices operating on frequency levels between 1.705 and 30 MHz in European countries such as Norway, Sweden, Finland, Italy, and Spain are not subject to any radiated emission limit at all. Moreover, EAS devices operating on frequency levels between 1.705 and 30 MHz in Great Britain are subject to a radiated emission limit of approximately 335 microvolts/meter measured at 30 meters, while other EAS devices marketed in the Netherlands are subject to an even higher radiated emission limit of approximately 513 microvolts/meter measured at 30 meters. Furthermore, the European Telecommunications Standards Institute, a voluntary standards-making organization officially recognized by the European Union, has adopted an interim radiated emission standard of approximately 1000 microvolts/meter measured at 30 meters for low-power RF devices operating on frequency levels between 4.78 and 30 MHz. See Interim European Telecommunication Standard § 7.2.1.3 (European Telecommunications Standards Institute 1994).

Because of the disparity between the emission standards in the U.S. and in certain international markets, U.S. manufacturers that also compete in these international markets for anti-theft devices are faced with two equally unpalatable choices. They may choose to manufacture two separate lines of anti-theft equipment, which increases production costs and reduces the potential for realizing economies of scale. Alternatively, they may choose to market anti-theft devices that comply with the more stringent emission limits of the United States, but are less powerful and less effective than similar equipment manufactured and sold in the international markets. In either event, U.S. manufacturers of anti-theft devices are placed at a severe competitive disadvantage because they are forced to manufacture devices that are either more costly or less effective than those devices sold by European manufacturers.

In light of the significant costs and competitive disadvantages faced by U.S. manufacturers, the Commission has recognized the need to harmonize the United States standards for radiated emissions from low-power RF devices with the international emissions standards for these devices. In particular, the Commission in 1993 revised its Part 15 rules to allow manufacturers of Part 15 digital devices to choose to demonstrate that their devices comply with either the existing Part 15 emissions standards or the international standards developed by the International Special Committee on Radio Interference ("CISPR"), a voluntary standards-making organization established under the auspices of the International Electrotechnical Commission. See Revision of Part 15 of the Rules to Harmonize the Standards for Digital Devices with International Standards, FCC 93-421 (released Sept. 17, 1993). Although the CISPR standards had not in fact been adopted all of the member

countries of the European Community, the Commission nonetheless recognized that allowing U.S. manufacturers the flexibility to choose between U.S. and international emission standards would "promote the ability of the United States manufacturers to compete fairly and effectively in international markets." Id. at ¶ 1. The Commission specifically determined that allowing U.S. manufacturers such regulatory flexibility "should greatly assist those companies with multi-national aspirations by reducing the number of tests they must undertake and test procedures they must follow in order to lawfully market their products both domestically and internationally." Id. at ¶ 8 (emphasis in original). For those same reasons, U.S. manufacturers of EAS devices should be afforded the same regulatory flexibility that was given to U.S. manufacturers of digital devices.

B. The Proposed Relaxation of Emission Limits Will Not Increase the Risk of Undue Interference to Licensed Radio Services

The relaxation of emission limits proposed herein not only will satisfy customer demand for more advanced anti-theft equipment, but also will not increase the risk of undue interference to the licensed radio services. In particular, EAS devices have a limited range of radiated emissions not only because they operate at relatively low power levels, but also because they typically operate within an enclosed area or inside buildings that attenuate the range of radiated emissions. See Part 15 Order, 4 FCC Rcd 3493, 3498. Moreover, any increase in the radiated emission limit that would create a significant risk of interference to licensed radio services also would undermine the effectiveness of the system by heightening the sensitivity of the system to nearby tagged items on shelves, thereby causing a high incidence of false alarms. Thus, it would not serve Checkpoint's interests to propose or

support a relaxation of the radiated emission limit that would create a significant risk of interference to other licensed or unlicensed radio services. Furthermore, any harmful interference caused by EAS devices operating at the proposed radiated emission limit would be localized and easily identified and corrected. See Anti-Pilferage Devices, 65 FCC 2d at 804. Significantly, because Checkpoint's EAS devices operate on a non-interference basis with licensed radio services, it would not serve Checkpoint's interest to develop and operate EAS devices that cause harmful interference to licensed radio services, since such devices would be required to cease operation, even though their operation may be in full compliance with the FCC rules. See 47 C.F.R. 15.5(c).

The Commission consistently has recognized that the unique characteristics of EAS devices warrant more flexible rules that permit such devices to operate with higher radiated emission limits. When the Commission last provided an increase in the radiated emission limits for EAS devices in 1977, it acknowledged that the risk of interference to licensed radio services was minimal as a result of the installation of EAS devices inside buildings, "which can be expected to attenuate the signals radiated from [EAS] devices." Anti-Pilferage Devices, 65 FCC 2d at 804. The Commission also noted that the localized nature of the service provided by EAS devices rendered any interference to licensed radio services easily identifiable and remediable. Id.

Moreover, when the Commission in 1989 carved out its various exceptions to the general radiated emission limit of 30 microvolts/meter measured at 30 meters for Part 15 devices operating in the 1.705 - 30 MHz band, it did so in the express belief that such exceptions would apply to devices that are less likely to cause interference as a result of the

"limited numbers of units in operation and the nature of the areas in which they are operated." See Part 15 Order, 4 FCC Rcd 3493, 3498. Specifically, the Commission indicated that anti-theft devices are precisely those types of Part 15 devices that are less likely to cause interference because they "have an effective range of a few feet and normally are used in buildings that attenuate the range of the emissions." Id. Thus, the Commission repeatedly has affirmed the fact that Part 15 anti-theft devices pose a low risk of interference to licensed radio services and therefore warrant more flexible technical limits.

Although the Commission has recognized the low risk of interference to licensed radio services from the radiated emissions of EAS equipment and thus has permitted higher radiated emission levels for such equipment, it has not had to contend with raising the conducted emission limit for EAS equipment. However, the rules of the Commission currently permit two major exceptions to the general conducted emission limit of 250 microvolts for Part 15 devices operating in the 450 kHz - 30 MHz band: (1) Class A digital equipment and (2) carrier current systems. Class A digital devices are digital devices that are not designed for use by the general public or in the home, but rather are designed exclusively for use in a commercial, industrial, or business setting. See 47 C.F.R. § 15.3(h). Carrier current systems are systems that transmit RF energy by conduction over the electric power lines. See 47 C.F.R. § 15.3(f) (1995).^{3/}

^{3/} Carrier current systems may be designed as unintentional radiators whereby signals are received by conduction directly from connection to the electric power lines. Carrier current systems also may be designed as intentional radiators whereby signals are received over the air as a result of radiation of the RF signals from the electric power lines. See 47 C.F.R. § 15.3(f).

Under the FCC's rules, Class A digital devices and carrier current systems are permitted to operate at higher or unrestricted conducted emission levels. Specifically, Class A digital devices may operate at a maximum of 1000 microvolts on frequencies between 450 kHz and 1.05 MHz and at a maximum of 3000 microvolts on frequencies between 1.705 MHz and 30 MHz. See 47 C.F.R. § 15.107(b). On the other hand, carrier current systems operating below 30 MHz generally are not subject to any conducted emission limits at all. See 47 C.F.R. §§ 15.107(c), 15.207(c).^{4/}

Just as the Commission permits Class A digital devices and carrier current systems to operate at significantly higher conducted emission levels, so should it also permit Part 15 EAS equipment to operate at conducted emission levels that are higher than currently allowed. The proposed increase in the conducted emission limit for EAS equipment will not pose any greater risk of harmful interference than the conducted emission levels that are presently allowed for Class A digital devices and carrier current systems. Indeed, the same reasons that the Commission has relied on to permit higher conducted emission limits for Class A digital devices also apply equally to justify higher conducted emission limits for EAS equipment.

In its prior rulemaking proceeding to adopt a comprehensive revision of the Part 15 rules, the Commission justified affording higher conducted emission limits for Class A digital devices on the ground that such devices did not present a significant risk of harmful

^{4/} Carrier current systems not containing their fundamental emission within the 535 - 1705 kHz band and not intended to be received using a standard AM broadcast receiver are subject to a conducted emission limit of 1000 microvolts within the 535 - 1705 kHz band. See 47 C.F.R. §§ 15.107(c), 15.207(c).

interference in light of their limited numbers and their operation in non-residential settings.

See Revision of Part 15 of the Rules Regarding the Operation of Radio Frequency Devices

Without an Individual License, 2 FCC Rcd 6135, 6136 (1987). Like Class A digital devices,

EAS devices are designed strictly for commercial purposes and are not intended for widespread use by the general public. Thus, in light of the limited commercial setting in which EAS devices operate, the potential for harmful interference to licensed radio services is minimal and certainly no greater than the risk of interference associated with Class A digital devices.

Furthermore, the results of Checkpoint's experimental operation of EAS equipment at the proposed radiated and conducted emission limits indicate that the potential for harmful interference from EAS operation at the proposed emission limits is extremely remote. Currently, Checkpoint holds an experimental authorization to operate its EAS equipment within the 7.4 - 9.0 MHz and 8.2 - 10.0 MHz bands at a maximum radiated emission level of 1000 microvolts/meter measured at 30 meters and at a maximum conducted emission level of 3000 microvolts. To date, Checkpoint has not received any complaints of interference resulting from its experimental operation at the increased radiated and conducted emission levels. Thus, the absence of any complaint of harmful interference from Checkpoint's experimental operation provides substantial evidence that the proposed permanent increase in the emission limits for EAS equipment will not result in harmful interference to the licensed radio services.

C. The Proposed Relaxation of Emission Limits Is Consistent with Both the Commission's Flexible Management Policy and the Regulatory Trend Toward Liberalizing Technical Restrictions

The proposed relaxation of the existing Part 15 emission limits will further the Commission's policy objective of promoting the "flexible use of the airwaves for commercial purposes." Statement of Reed E. Hundt, Chairman, Federal Communications Commission, on Spectrum Management Policy Before the Subcommittee on Telecommunications, Trade, and Consumer Protection, Committee on Commerce, U.S. House of Representatives, at 3 (Feb. 12, 1997). Indeed, in declaring that the Commission "must . . . promote spectrum efficiency in the unlicensed bands," Commissioner Ness has recognized as a basic principle of the flexible management policy that the Commission "must generally avoid mandating standards." Remarks of Commissioner Susan Ness, FCC, at the FCBA/Warren Publishing Wireless Communications Summit, 1996 FCC LEXIS 3268 (June 10, 1996). Moreover, the Commission also has cited its Part 15 rules as "a good example of the benefits of flexibility" largely because of the "minimal technical and use restrictions" afforded under those rules. Keynote Address by Michele C. Farquhar, Wireless Telecommunications Bureau, Before the Telestrategies "LMDS '97" Conference, 1997 FCC LEXIS 1466 (Mar. 19, 1997). Thus, in order to encourage the development of innovative and emerging technologies, the Commission must continue to adopt "only the minimal technical standards necessary to avoid interference to other users." Remarks of Commissioner Susan Ness, 1996 FCC LEXIS 3268.

As a specific objective of the Commission's flexible management policy, Chairman Hundt recently has proposed to review the Commission's conducted emission standards. See

The Hard Road Ahead -- An Agenda for the FCC in 1997, Reed E. Hundt, Chairman, FCC, 1996 FCC LEXIS 7111 (Dec. 26, 1996). Indeed, the Chairman expressly has acknowledged that "the present [conducted emission] limits have not been reviewed for far too long and may be unnecessarily inhibiting some high technology products and adding unnecessary costs to others." Id. Thus, the Chairman has committed to conducting a comprehensive program of field experiments to verify what emissions levels can be permitted without causing harmful interference to radio users. Id. Checkpoint supports the Commission's continuing efforts to reviewing its technical standards to encourage efficient and innovative use of the unlicensed spectrum. Moreover, Checkpoint fully expects that a thorough review of the Commission's existing Part 15 emissions standards will demonstrate the feasibility of and public need for a relaxation of such standards as proposed herein.

Although the Commission has not considered a further relaxation of the technical restrictions on the operation of EAS equipment in the 1.705 - 30 MHz band since 1977, it nonetheless has evidenced in recent years an increasing willingness to liberalize the emission limits for other low-power RF devices. For example, the Commission tentatively has proposed to permit biomedical telemetry devices to operate in the 174 - 216 and 512 - 566 MHz bands at a maximum power level of 5 milliwatts, which is comparable to a field strength of between 165,000 and 200,000 microvolts/meter measured at 3 meters. See Amendment of Part 15 of the Commission's Rules to Permit Operation of Biomedical Telemetry Devices, 11 FCC Rcd 1063 (1996) ("Biomedical NPRM"). Such devices are used in health care facilities to transmit patient measurement data to a nearby receiver. By providing this capability, biomedical telemetry devices enable health care providers to

monitor their patients remotely and thus allow their patients to enjoy increased mobility and improved comfort. Id. at ¶ 2.

Currently, biomedical telemetry devices are permitted to operate in the 174 - 216 MHz band at a maximum radiated emission limit of 1500 microvolts/meter measured at 3 meters and in the 512 - 566 MHz band at a maximum radiated emission limit of 200 microvolts/meter measured at 3 meters. See 47 C.F.R. §§ 15.209, 15.241. The Commission's proposal thus will significantly increase the current applicable radiated emission limit by at least 100-fold. In proposing to permit biomedical telemetry devices to operate at a substantially higher radiated emission level, the Commission recognized the public interest in providing cost-effective medical technologies to health care facilities. See Biomedical NPRM, 11 FCC Rcd at ¶ 5. The Commission also noted the distinct possibility that the level of ambient RF noise in health care facilities may be becoming so high as to threaten the continued usefulness of unlicensed biomedical telemetry devices that currently operate in the 174 - 216 MHz band. Id. at ¶ 3. The Commission further observed that the radiated emission level currently allowed for biomedical telemetry devices operating in the 512 - 566 MHz band may not be adequate for a viable service. Id. at ¶ 9. The Commission expressed its belief that in light of the "low" operating power of biomedical telemetry devices, "the probability of interference to a adjacent channel TV reception is very low and would only exist in a small area around a hospital." Id. at ¶ 11. Thus, the Commission tentatively has determined that a 100-fold increase in the radiated emission limit for biomedical telemetry devices would serve the public interest in obtaining effective biomedical telemetry services and would not cause undue interference to licensed radio services. Id. at

¶ 1. By comparison, Checkpoint seeks only a 10-fold increase in the radiated emission limit applicable to EAS devices.

In continuing with its trend toward relaxing the emission limits imposed on low power RF devices, the Commission also has waived Section 18.307(c) of its rules to allow General Electric Company to market to consumers an unlimited number of RF light bulbs that operate in the 2.2 - 2.8 MHz band at a maximum conducted emission level of 3000 microvolts, which is well in excess of the current limit of 250 microvolts. See Letter, dated October 23, 1995, from the FCC to Donald P. Zeifang, FCC 95-430 (released Oct. 24, 1995).^{5/} While noting the potential public benefit of obtaining energy-efficient and cost-effective consumer RF light bulbs, the Commission also determined that the increase in the conducted emission limit would not cause harmful interference to licensed radio services. Id. at 2. The Commission reasoned that licensed radio operations in the 2.2 - 2.8 MHz band are not normally employed or intended for reception in residential environments. Id. at 1. The Commission further observed that the rules currently permit RF light bulbs used in commercial environments to operate at a conducted emission level of 3000 microvolts and that there has been no record of significant interference problems. Thus, according to the Commission, there is no indication that imposing the same conducted emission limit for both consumer and non-consumer RF light bulbs would result in any significant increase in the potential for harmful interference. Id. at 2.

^{5/} In addition to granting a waiver of the conducted emission limits under Part 18, the Commission also declared its intent to conduct a rulemaking proceeding in the near future to propose permanent changes. See Letter, dated October 23, 1995, from the FCC to Donald P. Zeifang, FCC 95-430 (released Oct. 24, 1995).

In light of the Commission's increasing willingness to relax its rules to accommodate technological advances in existing services offered by low power RF devices, the modest increase in the emission limits for EAS equipment, as proposed herein, is consistent with the Commission's established objective of providing technical flexibility and minimizing harmful interference to licensed radio services. Indeed, the justification for relaxing the emission limits for EAS equipment is at least as compelling as the rationale used for increasing the emission limits for biomedical telemetry devices and consumer RF light bulbs. The proposed increase in the radiated emission limit for EAS equipment is much smaller than the increased radiated emission limit that the Commission has proposed to approve for biomedical telemetry devices. Moreover, unlike consumer RF light bulbs, which are used widely in residential settings, EAS devices are employed only in commercial settings. Consequently, the proposed increase in emission limits for EAS equipment presents a significantly smaller risk of harmful interference than the increase in emission limits that the Commission already has approved or proposed to approve for other low-power RF devices.

V. CONCLUSION

Based on the foregoing, Checkpoint respectfully requests the Commission to commence a rulemaking proceeding to relax the emission limits under Part 15 of the FCC's rules, as requested herein, to provide increased technical flexibility in the operation of Checkpoint's EAS equipment. Such Commission action will serve the public interest by

enabling the deployment of more effective anti-theft equipment, while minimizing the potential for harmful interference to licensed radio services.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Margaret L. Tobey", is written over a horizontal line.

Margaret L. Tobey, P.C.

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Date: April 28, 1997

CERTIFICATE OF SERVICE

I, Elizabeth O. Dickerson, an employee of Akin, Gump, Strauss, Hauer & Feld, L.L.P., certify that copies of the foregoing **PETITION FOR RULEMAKING** were sent by Hand Delivery on this 28th day of April 1997, to the following parties:

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